

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Attorney Docket No.: Safoco-1-1

Terry G. Young

Serial No.: To Be Assigned

Filed: ~~Herewith~~ 03/30/00

Anticipated Art Unit No.: 3753

For: Valve Actuator Apparatus
and Method

PRELIMINARY AMENDMENT

Box Patent Application
Assistant Commissioner for Patents
Washington, DC 20231

Sir:

Kindly amend the above-identified application as follows:

In the Title

Please amend the title as follows:

Valve Actuator Apparatus [and Method]

Below the title, please add the following heading and paragraph:

-CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. Application Serial No. 08/968,904, filed on
November 6, 1997, ^{now U.S. Pat. No. 6,089,532} which is a continuation of U.S. Application Serial No. 08/206,424, filed on
March 4, 1994, ^{now abandoned}

In the Claims

Please cancel Claims 1-20.

Please add the following new claims, 21-23:

21. A valve actuator for moving a valve gate between open and closed valve positions within a valve body, said valve actuator comprising:
- an operator assembly including:
- (a) an operator housing defining a pressure chamber therein and having a fluid entry

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- a bonnet assembly including:

- (b) an elongated bonnet stem having first and second ends, said stem being axially movable in said bonnet housing bore, unconnected at said first end to said operator member and securable at said second end to said valve gate for moving said valve gate to said open and closed valve positions;

- (d) a contact member, separate from said operator member, having an outer flange, and rotatably and axially affixed to said first end of said bonnet stem, and having a surface facing said operator member for drive contact with said operator member;

- (e) an upper spring retainer separate from said operator member and said contact member, coaxially surrounding and rotatable with respect to said bonnet stem and said contact member, and having an inner flange for engagement to said bonnet stem and to receive said movement of said operator member toward said valve body;

- (f) a lower spring retainer coaxially surrounding said bonnet housing; and
- (g) securing means connected to said bonnet housing in surrounding relationship therewith for longitudinally securing said operator housing to said bonnet housing, said securing means permitting removal of said operator assembly from said bonnet assembly leaving the

bonnet assembly intact to hold said valve closed when said operator assembly is removed.

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22.

A valve actuator for moving a valve gate between open and closed valve positions within a valve body, said valve actuator comprising:

an operator assembly including:

(a) an operator housing defining a pressure chamber therein and having a fluid entry port; and

(b) an operator member within said operator housing movable toward said valve body in response to pressurized fluid introduced into said operator housing pressure chamber through said fluid entry port; and

a bonnet assembly including:

(a) a bonnet housing securable to said valve body, said bonnet housing having a bonnet housing bore therethrough;

(b) an elongated bonnet stem having first and second ends, said stem being axially movable in said bonnet housing bore, unconnected at said first end to said operator member and securable at said second end to said valve gate for moving said valve gate to said open and closed valve positions, said first end of said bonnet stem being externally threaded;

(c) a spring for producing a biasing force opposing axial movement of said operator member toward said valve body;

(d) a contact member, separate from said operator member, having an outer flange, an internally threaded bore, and a surface facing said operator member for direct contact with said operator member, said threaded end of said bonnet stem being received in said threaded bore of said contact member;

(e) an upper spring retainer separate from said operator member and said contact

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member, coaxially surrounding and rotatable with respect to said bonnet stem and said contact member, and having an inner flange for engagement of said outer flange of said contact member to transmit said biasing force to said bonnet stem and to receive said movement of said operator member toward said valve body;

(f) a lower spring retainer coaxially surrounding said bonnet housing; and

(g) securing means connected to said bonnet housing in surrounding relationship therewith for longitudinally securing said operator housing to said bonnet housing;

said operator assembly being removable intact from said bonnet assembly leaving the bonnet assembly intact to hold said valve closed when said operator assembly is removed.

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23. A valve actuator for moving a valve gate between open and closed valve positions within a valve body, said valve actuator comprising:

an operator assembly including:

(a) an operator housing defining a pressure chamber therein and having a fluid entry port; and

(b) an operator member within said operator housing movable toward said valve body in response to pressurized fluid introduced into said operator housing pressure chamber through said fluid entry port; and

a bonnet assembly including:

(a) a bonnet housing securable to said valve body, said bonnet housing having a bonnet housing bore therethrough;

(b) an elongated bonnet stem having first and second ends, said stem being axially movable in said bonnet housing bore, unconnected at said first end to said operator member and securable at said second end to said valve gate for moving said valve gate to said open and closed

valve positions;

(c) a spring for producing a biasing force opposing axial movement of said operator member toward said valve body;

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(d) a contact member, separate from said operator member, having an outer flange, and rotatably and axially affixed to said first end of said bonnet stem, and having a surface facing said operator member for drive contact with said operator member;

(e) an upper spring retainer separate from said operator member and said contact member, coaxially surrounding and rotatable with respect to said bonnet stem and said contact member, and having an inner flange for engagement of said outer flange of said contact member to transmit said biasing force to said bonnet stem and to receive said movement of said operator member toward said valve body;

(f) a lower spring retainer coaxially surrounding said bonnet housing; and

(g) securing means connected to said bonnet housing in surrounding relationship therewith for longitudinally securing said operator housing to said bonnet housing, said securing means including a base ring configured for rotation relative to said bonnet housing without affecting selected bonnet stem drift;

said operator assembly being removable intact from said bonnet assembly, leaving the bonnet assembly intact to hold said valve closed when said operator assembly is removed.--

Respectfully submitted,

[Signature]
C. James Bushman
Reg. No. 24,810

CERTIFICATE OF EXPRESS MAILING

I, Jan C. Lipscomb, hereby certify that this correspondence and all referenced enclosures are being deposited by me with the United States Postal Service as Express Mail with Receipt No. EL362272355US in an envelope addressed to Box Patent Application, Assistant Commissioner for Patents, Washington, DC 20231, on March 30, 2000.

By: *[Signature]*

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